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Foster Care and Education: Exploring the Success of Interventions Aimed to Improve Academic Achievement of Foster Children

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**Foster Care and Education: Exploring the Success of Interventions Aimed to Improve
Academic Achievement of Foster Children**

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MSW Clinical Research Paper

Presented to the Faculty of the School of Social Work

St. Catherine University and University of St. Thomas

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In partial fulfillment of the Requirements for the Degree of Masters of Social Work

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Abstract

Foster care youth are faced with many academic difficulties throughout their childhood and adolescence such as an increased risk of academic failure, higher drop-out rates, special education placement, and grade repetition. The researcher identified six articles that explored various educational interventions aimed to improve the academic outcomes for foster care youth. This exploratory study evaluated the selected interventions research methods, measurement tools, and findings. The findings identified three common themes: tutoring interventions, school stability interventions, and exploratory interventions. These themes mirror the results of past literature regarding academic interventions for foster care students, demonstrating differing efficacy and results among all three types of the identified interventions. Due to the differing methods and tools of measurement being used in each identified study, all three categories of interventions included studies that did not yield significant results, as well as studies that demonstrated positive academic gains. Implications to social work practice, policy, and continuing research are discussed.

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Children living in foster care have a high risk of academic failure, special education placement, and an increased dropout rate (Pears, Kim, Buchanan, & Fisher, 2015; Trout, Hagaman, Casey, Reid & Epstein, 2008). The research on this subject suggests that being in foster care can create negative outcomes for children academically, socially, emotionally, and behaviorally. (Pears, Kim, Buchanan, & Fisher, 2015; Trout, Hagaman, Casey, Reid & Epstein, 2008; Stanley, Riordan, & Alaszewski, 2005). Foster care youth are defined as "...any child who has been removed from the custody of their parent(s) or guardian(s) by the juvenile court, and placed in a group home or foster home." (Napa County Office of Education, 2015). The U.S. Department of Health and Human Services report that there were 415,129 children in foster care as of September 30th 2014 (AFCARS Report, 2015). The high rate of children in foster care is an international issue and spans beyond the United States; in 2012, there were 85,000 children under the protection of Child and Family Services in Canada (Ferguson & Wolkow, 2012). Children in the welfare system work closely with social workers from both county and school systems. Because the number of children in foster care is increasing every year, it is vital that social workers understand the educational risk factors and realities of the achievement gap for children living in foster care. Social workers must be equipped to make a positive impact at the micro and macro level and work diligently to improve the academic achievement of these students.

There are many contributing factors to the foster care academic achievement gap, some of which include early life adversity, living in poverty, and elevated school mobility. (Pears et al., 2015; Trout et al., 2008). In addition to decreased academic outcomes, children in foster care also fare worse on socioemotional measures and being in foster care can contribute to a poor behavioral adjustment for children (Pears, Heywood, Kim & Fisher, 2011). Based on these

results, it is evident that foster care children require additional support and interventions in order to narrow the achievement gap for foster care students both at school and at home. However, due to the vast number of factors that contribute to the achievement gap, the types of interventions being implemented vary greatly from one another. Additionally, despite the many types of interventions being employed, it is still unclear what aspect of the intervention made it a successful technique for those particular students. While some foster students may benefit from residential schooling, others may thrive when receiving support from their foster care givers; the efficacy of interventions may be caused by underlying principles such as creating safe relationships rather than the actual intervention itself, making it difficult to determine the ideal approach to improve academics for this population of students.

It is clear that in comparison to their peers, foster care youth are at a disadvantage academically (Pears et al., 2015; Trout et al., 2008) and socioemotionally (Pears et al., 2011). The number of children in the foster care system is vast in both the United States (AFCARS Report, 2015) and internationally (Ferguson & Wolkow, 2012) demonstrating the great need for interventions that will improve the academic achievement of this growing population of students. However, there are differing opinions of what approach is most effective for increasing academic outcomes for foster care children. Some research studies found that prioritizing additional tutoring to help increases academic achievement (Flynn et al., 2012; Harper & Schmidt, 2016), whereas others indicate that school placement consistency is the most important factor for academic success and therefore, should take precedence (Lee & Barth, 2009). It is widely agreed upon that there are various barriers to education for foster care children and that interventions are necessary to help decrease the achievement gap for these children (Pears et al., 2015; Trout et al., 2008).

This issue is especially meaningful to social work because of their high-level of involvement and interaction with this population of students. Children in foster care regularly interact with school social workers, school therapists, child protection workers, and case managers. Additionally, the National Association of Social Work (NASW) code of ethics (2014) states that social workers are expected to strive for social justice and the equality of opportunities for all people. Children living in foster care constitute one such vulnerable population.

There are several types of interventions that have been implemented in an attempt to improve the academic achievement of foster care students, however, they can be differentiated into three categories; school consistency interventions, book gifting interventions, and tutoring interventions. Each of these interventions have varying levels of success. This research aims to examine the efficacy of differing academic interventions for foster care children ages 13 years old and younger to determine what results are associated with a certain type of intervention. The research method for this study will be a systematic review.

Literature Review

A review of the literature regarding the educational achievement of children in foster care reveals a focus on social, emotional, and behavioral health; reading deficits and a lack of readiness for school; and negative academic outcomes. This literature review will focus on the effects of foster care, barriers to academic achievement, and interventions intended to improve academic achievement for students in foster care.

Factors Leading to Foster Care Placements

There are numerous reasons that children are placed into the foster care system, including abuse, neglect, severe behavioral problems, and a variety of parental concerns such as abandonment, illness, incarceration, AIDS, substance abuse, and death (American Academy of Child and Adolescent Psychology, 2013). Being removed from home and being placed in the foster care system is a highly traumatic and emotional for children. Riebschleger, Day, and Damashek (2015) interviewed children in the foster care system and they found that 64 types of trauma occurred before being placed in foster care, 37 types of trauma occurred while in foster care, and 12 types of trauma occurred following foster care. The researchers found that the most common type of abuse cited prior to being placed in foster care was sexual abuse, in addition to unsafe or unstable housing, and parental substance abuse. Additionally, youth reported experiences of neglect, physical abuse, parental mental illness, and caregiver suicides, as traumatic experiences leading to their entry in the foster care system (Riebschleger, Day, & Damashek, 2015). Clearly these experiences were traumatic in nature and likely impacted the youth's ability to succeed mentally, physically, socially, and academically. Riebschleger, Day, and Damashek (2015) also reported that more than 19 percent of foster care youth demonstrate

clinical symptoms of post-traumatic stress disorder due to the exposure of trauma they've endured leading to a foster care placement. This demonstrates the fragile nature that children are in upon entering the foster care system, and the tribulations they have already gone through prior to being removed from their home.

Impact of Foster Care on Child Well-Being

The U.S. Department of Health and Human Services report that in 2015 there were 427,910 children in foster care as of September 30th 2015 (AFCARS Report, 2016). The high rate of children in foster care spans beyond the United States, in 2012 there were 85,000 children under the protection of Child and Family Services in Canada (Ferguson & Wolkow, 2012). There is substantial evidence that negative risk-factors are associated with out-of-home placement in foster care. It is critical that social workers understand what the impact of foster care placement is on child well-being.

Impact on Behavior and Social-Emotional Well-Being

In addition to poor academic outcomes, children in foster care also fare worse on social-emotional measures and being in foster care can contribute to a poor behavioral adjustment for children (Pears, et al., 2011) In a study by Stanley, Riordan, and Alaszewski (2005), it was found that the majority of the children in foster care had experienced at least one change in placements while being in the child welfare system. Of those moves, most were unplanned and mainly due to difficulties with the child in the placement, and the remainder of new placements were in response to changes or problems experienced by the foster carer (Stanley et al., 2005). Children who experience multiple changes in foster care placements tend to develop higher emotional and

behavioral problems, which then in turn can lead to more placement turnover, thus resulting in a cycle (Stanley et al., 2005).

In addition to behavioral issues, foster care children are also at a higher risk of suffering from mental health issues. A survey conducted by Mark E. Courtney, Sherri Terao, and Noel Bost (2004), found that among children who turn 18 in foster care approximately two thirds of the boys and half of the girls had a history of delinquency. This same group of children, as compared to the national average of youth who did not experience foster care, was three times more likely to have mental health needs and four times as likely to have been treated for a sexually transmitted disease.

There is significant evidence that foster care placement can have a negative impact on various aspects of child well-being. The negative impact can result in behavioral problems, emotional and social challenges, mental health problems, and academic struggles (Courtney et al., 2004; Pears et al., 2011; Pears et al., 2015; Stanley et al., 2005; Trout et al., 2008). While all of these areas are important, academic achievement sets children up to for future success in all areas of life, and provides them with further academic, career, and socioeconomic opportunities (Martin & Jackson, 2002).

Given the poor educational outcomes, it is essential to understand the barriers to school achievement, and effective interventions to support school success for children in foster care.

Impact on Educational Well-Being and Academic Success

There are several studies designed specifically to examine how being in foster care impacts children's educational well-being and academic achievement. Research indicates that children in foster care, when compared to their non-foster care peers have a high risk of

academic failure, special education placement, and dropout rates (Pears, Kim, Buchanan, & Fisher, 2015; Trout, Hagaman, Casey, Reid & Epstein, 2008). Trout et al. (2008) conducted a systematic review regarding foster care students and the findings demonstrated that a third or more of children in foster care fall into the “low to average” or “low” range academically, and there was limited evidence of children in foster care performing above average. Similarly, in a study assessing pre-reading deficits, Pears et al. (2011) found that up to 50% of children in foster care entering kindergarten are at risk for having reading difficulties later on. Additionally, it was discovered that 54% of the 63 foster care children included in this study scored below the 23rd percentile (Pears, Heywood, Kim & Fisher, 2011). The results of these studies demonstrate the severe academic deficits for children living in foster care, sometimes starting even before entering kindergarten.

Barriers to Education

In every realm of life, a strong educational foundation is essential to future success. Given the poor educational outcomes of children in foster care, it is especially important to understand what barriers to education exist for this population of students. There are a number of barriers to education and factors that contribute to the foster care and academic achievement gap. Along with issues of poverty and general adversity, one significant barrier to academic success for children in foster care is the high rate of school mobility associated with multiple foster care placements (Pears et al., 2015; Trout et al., 2008). Additionally, children in the foster care system have usually experienced a significant amount of trauma in their life, as well as numerous broken relationships due to being forcibly removed from their homes (Riebschleger, Day, and Damashek, 2015).

School Mobility

Too often, children in foster care are forced to change schools if they are placed in a new foster placement. Ferguson and Wolkow (2012) state that it's fairly common for these transfers to take place during vital times during the academic year. As a result of a change in foster care placement and subsequent change in school enrollment, foster care children often miss large amounts of school instruction, lose academic credits in transfer, and experience an overall disruption in their education (Ferguson & Wolkow, 2012). Zetlin, Weinberg, and Luderer (2004) found that there is a severe lapse in tracking, recording, and distributing educational information for foster care students. School records were seldom complete, accurate, or easily accessible (Zetlin, Weinberg & Luderer, 2004). Each of these examples demonstrate the toll that frequent school moves can have on a child in foster care.

Beyond inaccurate school records, and challenges in communication, elevated school mobility negatively effects the foster care student's ability to form relationships with fellow classmates and school staff. Being placed in a foster care placement is a monumental transition, where foster care children are already being forced to adapt to a new environment. Therefore, the lack of school stability while in foster care can be devastating to their academic achievement as well as their emotional and behavioral well-being. Stanley, Riordan, and Alaszewski (2005) found that the vast majority of foster care children that they studied had experienced at least one change in placements while being in the foster care system. The researchers concluded that children who experience multiple changes in foster care placements tend to develop higher emotional and behavioral problems, which then in turn can lead to more placement turnover (Stanley et al., 2005). Therefore, elevated school mobility not only has negative academic effects, but can also lead to an increase in socioemotional, and behavioral issues.

Communication Barriers and Policy Issues

Another barrier to the education for children in foster care is poor, uncoordinated, or a lack of communication between foster care workers, families, and schools (Noonan, Matone, Zlotnik, Hernandez-Mekonnen, Watts, Rubin, and Mollen (2012). Sometimes, school administrators and social workers have difficulty understanding who is legally responsible for a foster child. Is the legally responsible party the county child welfare system, the foster parent, or the biological parent? (Noonan et al., 2012). Power struggles can ensue, especially when the child in foster care requires mental health treatment or when the child has to change schools. Policies and procedures around foster care children changing schools are not always communicated clearly, or being followed, and therefore can lead to confusion and frustration among foster care workers and school employees. (Noonan et al., 2012). Issues involving transportation seemed especially poignant, because if a child wanted to remain in their school but is moving foster care placements they may require transportation accommodations, and it is crucial to figure out who is responsible for providing or paying for those services. (Noonan et al., 2012).

Interventions to Support Academic Success

Three types of interventions intended to increase the academic achievement of foster care students, include, residential schools (Lee & Barth, 2009), book gifting interventions (Griffiths, 2012; Mooney, Winter, & Connolly, 2016), and tutoring interventions (Flynn, Marquis, Paquet, Peeke, & Aubry 2012; Harper and Schmidt, 2016). Each of these interventions vary in efficacy.

Residential Schools

The implementation of residential schools for low-income or foster care students is a relatively new initiative in both the United Kingdom and the United States (Lee & Barth, 2009).

Residential education is defined as a collective term for all community-like environments where students both reside and learn outside of their families' homes. Therefore, residential education differs greatly from a residential treatment facility that aims to interrupt certain maladaptive behaviors such as substance abuse issues or eating disorder symptoms (Lee & Barth, 2009). The first national survey of residential education programs was created by Lee and Barth (2009) and collected data from 67 residential schools. The results of this survey demonstrated that there is a growing interest in residential education programs given that there were 10,048 applicants for these programs and less than half of those applicants were granted enrollment in a residential education program. Additionally, Lee and Barth (2009) suggest that residential programs can help combat the educational inequities that foster care and disadvantaged youth face. This is in congruence with Pears et al. (2015) theory about school mobility and the adverse effects that foster care youth experience by switching schools more frequently than the average student. While Lee and Barth (2009), and Pears et al., (2015) operate under the theory that school consistency will aid in academic achievement, other researchers prioritize tutoring methods, or book gifting interventions to decrease foster care student's achievement gap.

Book Gifting

The Letterbox Club is a book gifting program that began in 2003 as a small initiative for a small urban community in England and was created with the intent of increasing reading and math skills among foster children ages seven to 11 (Griffiths, 2012). Children in the initial Letterbox Club in England received parcels once a month with books, and math games that were level appropriate, as well as stationary items. Griffiths (2012) found that after six months of being a member of the Letterbox Club the children had made an average gain of 3.9 points on their standardized reading proficiency scores; she further explains that the subjects "reading

age,” –or the age level they are reading at, increased significantly after receiving the Letterbox Club materials. Overall the response to this initial study on the Letterbox Club was overwhelmingly positive, with many positive testimonies from the foster care children and parents (Griffiths, 2012). Based upon these results, it would appear that the Letterbox Club is an academic intervention that the children enjoyed and was effective in increasing their academic achievement, however Mooney, Winter and Connolly (2016) discovered different results when they implemented the Letterbox Club in Northern Ireland.

Mooney et al., (2016) wanted to ascertain whether the Letterbox Club was effective in improving reading skills, specifically reading rate, accuracy, comprehension, and the enjoyment of reading. Their study included 116 children in foster care in Northern Ireland, half of whom received Letterbox Club materials for six months and the other half of whom served as a waitlist control group. At the conclusion of the study the researchers found that the Letterbox Club had no effect on the children's reading scores nor their perceptions of reading (Mooney et al., 2016). These results differ greatly from Griffiths (2012) outcomes on the Letterbox Club. Mooney et al., (2016) hypothesize that the reason their study yielded no results was due to the lack of instructions included for either the children or the foster care parents on how to use the materials provided. It is possible that not only the lack of instructions contributed to the poor outcomes, but also a deficit in the relationship between the care giver and the foster child as well. Additionally, Mooney et al., (2016) found that many of the children receiving parcels already had readily available access to books and were not excited by receiving more reading material. Overall the researchers believed that if the foster care parents were provided with a manual, and were more involved in the use of the Letterbox Club materials, that the students may have been more significantly benefited (Mooney et al., 2016).

Griffiths (2012) and Mooney et al., (2016) both implemented the Letterbox Club for students in foster care and they yielded wildly different results. Despite different methodologies that may have contributed to these findings, it is clear that book gifting interventions based upon Griffiths (2012) and Mooney et al., (2016) research have varying degrees of efficacy, and may only sometimes improve academic achievement in foster care students.

Tutoring

Just as traditional students might seek tutoring for additional academic help, the same thought process was applied in addressing the foster care achievement gap. There have been multiple variations among tutoring interventions tailored to foster care children, and the results have been generally positive, however these methods continue to have room for improvement (Flynn et al., 2012; Harper & Schmidt, 2016).

Harper and Schmidt (2016) studied the effectiveness of Direct Instruction tutoring (DI) on 2nd-7th grade foster care students who were behind in their academic achievement. The students' academic achievement was assessed prior to receiving any tutoring sessions; the participants then received two hours of tutoring for 25 weeks by student volunteers from Lakehead University. The results showed that the DI tutoring program had a small to moderate effect on word reading, and significant improvement on spelling and math scores, however there was not a statistically significant effect on sentence comprehension (Harper & Schmidt, 2016). Considering that many of the students who participated in this study started with average spelling skills, below average word reading and sentence comprehension and very low math skills the results that Harper and Schmidt (2016) found are encouraging. This DI model has been applied in other studies in relation to the academic achievement gap in foster care students and similar results were found, however different implementation processes were used.

Flynn et al., (2012) sought to investigate whether individual DI tutoring by foster parents would positively impact foster care children's reading and math skills. This study was similar to Harper and Schmidt's approach (2016) in that it utilized DI instruction, they administered a pre-test and post-test to determine academic achievement, and the goal was to improve students reading and math skills. The two studies mainly differed in how the tutoring was administered to the participants. Flynn et al, (2012) had the foster parents administer the tutoring interventions, and the tutoring sessions were greater in time per week and longevity, lasting for three hours per week for 30 weeks. The foster parents also followed the Teach Your Children Well (TYWC) model and had direct instructions on how many minutes to spend on each subject, as well as ways to incorporate a behavioral management component into the session (Flynn et al., 2012). The results demonstrated significant improvement in sentence comprehension, reading composite, and math computation, however the spelling results were far from statistically significant and the improvement index was negative and quite small in size. Similar to Harper and Schmidt (2016), Flynn et al., (2012) found significant gains in multiple subject areas, but in one area, spelling, students did not improve after the tutoring intervention despite the children receiving longer tutoring sessions over a larger period of time.

Based on the research, it is evident that being in the foster care system can result in negative outcomes for children and a higher risk of academic failure (Pears et al., 2015; Trout et al; 2008). While researchers have sought to figure out why foster care children are more at risk for things like delinquency, mental health issues, and academic failure there is no one clear answer. Additionally, there are many situations and experiences that serve as barriers to education for foster care children such as early life adversity, poverty, and school mobility (Pears et a., 2015; Trout et al., 2008). Therefore, it is difficult to start breaking down those barriers

when it is unclear as to what exactly is creating these negative academic outcomes. The interventions being implemented to combat educational barriers are based on varying theories, and use different methodologies, and approaches (Flynn et al., 2012; Griffiths, 2012; Harper & Schmidt, 2016; Lee & Barth, 2009; Mooney et al., 2016). There is no clear leader as to which intervention technique is the most effective in improving the academic achievement of foster care children. Therefore, this systematic review seeks to explore what academic interventions have had success in improving the academic achievement of foster care children ages 13 and younger

Conceptual Framework

The conceptual framework for this research study includes both the work resulting from the Adverse Childhood Experiences study (ACES) and Maslow's Hierarchy of Needs. Both of these frameworks offer foundational concepts through which to explore what academic interventions had had success in improving the academic achievement of foster care children ages 13 and younger. In both cases, key concepts of both ACES and Maslow's Hierarchy of Needs offer a practical lens that help understand the educational issues facing foster care youth.

Adverse Childhood Experiences

The Centers for Disease Control and Prevention (CDC) conducted the original Adverse Childhood Experiences (ACEs) study at Kaiser Permanente for two years starting in 1995, spanning until 1997. The study aimed to examine investigations of childhood abuse and neglect, and how it impacted children later on in life (Center of Disease Control and Prevention, 2016). The researchers found that the larger number of ACEs that a child has experienced, the larger their risk was for alcoholism, depression, smoking, multiple sexual partners, and poor academic achievement, among several other negative outcomes. The findings of the ACEs study are relevant to this research project because, many times children are placed in foster care due to parental abuse or neglect, which according to the CDC is classified as an ACE (Center of Disease Control and Prevention, 2016).

The results of the ACEs study are congruent with much of the research regarding the negative effects that foster care can have on children (Courtney et al., 2004; Pears, et al., 2011; Pears et al., 2015; Trout, et al., 2008). Being removed from one's family and being placed in a foster care home is in itself a traumatic experience for a child. This trauma experience is an example of an adverse childhood event as articulated in the ACES questionnaire. Additionally,

the events preceding entering the foster care system such as parental neglect or abuse, also have the potential to be classified as an ACE, therefore increasing the risk for negative outcomes later in life (Center of Disease Control and Prevention, 2016). The ACE research study highlights the wide spanning negative impacts that adverse and traumatic events can have on children, one of which was poor academic achievement, which relates directly to this research study. Application of the ACEs study findings may be reflected in the interpretation of data in this research project. For instance, it may be possible that the number of foster care placements that a child has is negatively correlated to their academic achievement. This would be congruent with the ACEs study, in that the more adverse events a child experiences, the higher their risk for negative outcomes later on in life.

Maslow's Hierarchy of Needs

Maslow's Hierarchy of Needs is a theory developed by Abraham Maslow in 1943 that describes five levels of human needs. These levels of needs are often depicted in a pyramid or tiered model. Maslow suggested that once a level is fulfilled that the next level above is what motivates humans, up until they reach the fifth and final level of need (McLeod, 2016). The first and most basic need on Maslow's model is physiological needs such as air, food, water, shelter, etc. The second level of need is safety, which includes security, protection from the elements, stability etc. The third level of human need is love and belongingness, including friendship, intimacy, trust and acceptance, and affiliation with a group such as a family, friends, or work place. The fourth tier of the model is esteem needs, which could mean esteem for oneself, and, or, the aspiration for respect and status from others. The fifth and final level of Maslow's hierarchy is self-actualization needs, which includes realizing personal potential, seeking personal growth, and self-fulfillment (McLeod, 2016).

Maslow's hierarchy of needs may help to explain why foster care students struggle with academic outcomes. If a child in foster care does not have the first three levels of need fulfilled (physiological, safety, and love and belonging) it may be difficult for them to see the merit in furthering their education. Due to the fact that children in foster care have been removed from their primary care givers, it may be possible that they are lacking the love and affiliation with a family unit, and therefore are unable to maintain focus on educational goals.

Based on these two frameworks, I predicted that interventions regarding school or foster care placement stability will be more effective in improving academic achievement. If safety and security can be provided through maintaining a consistent home or school environment, perhaps foster care students would be able to increase their academic outcomes. I remained open, however, to other interventions that may demonstrate positive results in increasing foster care students' academic achievement. The purpose of this research was to conduct an exhaustive review of research about effective educational interventions for the academic success of youth in foster care.

Methods

It is important to gain a broader understanding of the various interventions and their results to discover what interventions are effective in increasing academic achievement for foster care students. Comparison of these interventions help provide insight as to what type of interventions have found success in improving academic achievement. There are various research studies that seek to determine if a certain intervention is effective in improving academic achievement for foster care students, however the literature varies widely in type of intervention employed, data collection methods, and measurement of outcomes. For this reason, this project's research design was a systematic review of interventions and programs used to increase foster care student's academic achievement. In this methods section, the specific inclusion criteria, search strategy, data abstraction approach, and strengths and limitations of the systematic review research is explained in detail.

Research Design- Systematic Review

The purpose of this study was to evaluate the results of various interventions used to improve educational outcomes for students in foster care. The research method for this study was a systematic review. The purpose of a systematic review is to sum up relevant available research through the analysis and synthesis of the results of several studies (Saran, 2017).

A systematic review was chosen as the method for this research project in order to evaluate the results of various interventions that have been implemented with foster care students. By synthesizing of the results from previous research studies, the implications of implementing a specific type of intervention over another type of intervention was discovered, as

well as the ideal type of intervention to use when improving academic achievement. The systematic review research design involves a process in which empirical research was evaluated and assimilated into succinct findings regarding a specific research question. The findings of a systematic review can be utilized in offering implications for future practice and research, as well as influencing social work practice and policy. Additionally, since the inclusion criteria, search strategy, and data abstraction approach is outlined in detail, this systematic review could be replicated in the future.

Inclusion Criteria

There are several factors to consider when determining what sources are appropriate for inclusion in the systematic review. For the purpose of this clinical research study, I employed a mixed method approach, and included articles that researched academic interventions for foster care children ages 20 and younger that have been conducted within the last 20 years. These parameters ensured that the research is current, focused specifically on children and adolescents in similar developmental stages, and still mostly dependent on their caregivers. This research study focused on the academic achievement of students to prevent them from falling behind and get them on track with their non-foster care peers

I searched for scholarly articles in three literature database SocINDEX, ERIC, and Child Development and Adolescent Studies. These databases were chosen because each contain literature in one or more of the following subjects: foster care, social work, education, and child related research. I used the search terms “foster-care,” “academic achievement,” “academic interventions,” and “foster student,”. Terms were also used in combination within one another, such as “foster care” AND “academic achievement”.

Data Abstraction

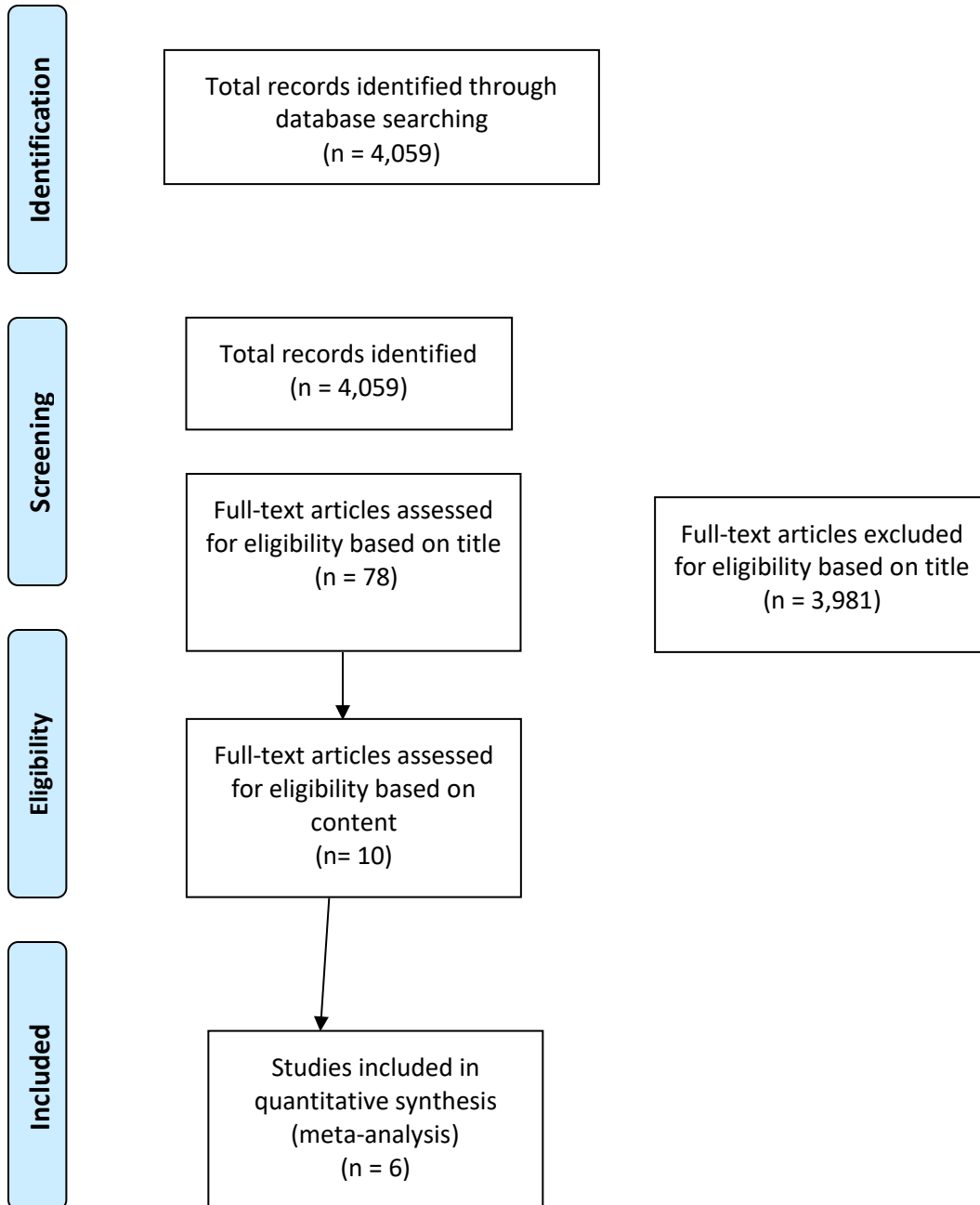
The information that was collected from the selected articles included various types of interventions used to increase academic achievement. The research studies included in this systematic review vary in the type of intervention used, research methods, data collection methods, and measurement tools. Therefore, the results of this systematic review compared data from varying interventions and research models in effort to see if a specific model was particularly successful in increasing academic achievement for foster care students. This allowed for further analysis regarding which interventions were more successful than others in increasing academic achievement.

Strengths and Limitations

The strengths of a systematic review approach for this research project include the ability to gather information about what interventions are currently being used, as well as what has been used in the past to help support foster care student's education. Furthermore, the findings of this project should be generalizable due to the wide spanning comprehensive nature of a systematic review. Because the research method of systematic review provides a detailed process of data collection and data analysis, future researchers will be able to duplicate this study. Findings of this systematic review hold potential implications for social work practitioners who hope to increase the academic success of children in foster care.

One limitation of this systematic review is that the studies being analyzed represent a wide variety of research methods. Due to the mixed methods being employed in each study, there may be variables involved in some studies that had an additional influence on the data. The included studies were mainly quantitative research (83 percent), and one included study (16

percent) was a qualitative study. Therefore, it was difficult to compare the results of the included studies due to the different research methods used, varying measurement tools, and numerous data analyzation techniques employed. Due to the widely differing research techniques used, it is difficult to decipher what type of intervention was most effective in increasing academic achievement considering many uncontrolled variables that were present. Additionally, the studies included implemented different recruitment methods when finding participants, some of which were chosen due to convenience rather than a randomized method, and therefore the findings cannot be generalized to the greater population.

Findings**PRISMA Flow Diagram**

Article Title	Participants	Design	Data Analysis	Results
The acceptability of educational interventions: Qualitative evidence from children and young people in care Evans, Hallett, Rees, & Roberts (2016)	26 young people ranging in age from 16-27 years old, all of which had been in foster care, kinship care, or residential care.	Participants were recruited from The Fostering Network, a non-governmental organization, and placed randomly into one of four potential focus groups.	Thematic analysis was conducted. Data was indexed and coded by 2 members of the research team.	Participants highlighted the importance of relationships with primary care givers in supporting education, the inclusion of games and interactive activities, having education advocates, a preference for group interventions, and a dislike for interventions that required additional care system professionals.
Understanding Correlates of Higher Educational Attainment among Foster Care Youths Hunter, Monroe, & Garand (2014)	1,266 foster care youths in the foster care system in a Southern state in the U.S. between the ages 14-17 years old.	Randomized Data was used from the National Youth in Transition Data, using the research from surveys that states are federally mandated to complete every six months.	Multiple regression model, and priori power analysis were used. Dependent variable was educational attainment, various independent variables were present such as race.	Found that most youth were 2 grade levels behind, majority of youth were African American, average kid spent 3.5 years in care, and changed placements 6 times, one-third received academic support. Promotive factors include the longer time spent in care, academic support, special education, and post- secondary support.
Predictors of Success in a Residential Education Placement for Foster Youths Jones (2012)	246 youth enrolled in a voluntary residential education facility for foster care youth	Used data from all youth of high school age that entered the facility in October 2001- June 2005. Analyzed outcomes on exit graduation.	Descriptive statistics were used, including t tests, chi squares, and tests of significant of differences in proportions. Bivariate analysis was also used.	69% of students were successful meaning they graduated, continued school, reunified with parents, or went to a lower level of care. 36% of the sample were African American. 31% of students had an unsuccessful exit, most times due to needing a higher level of care.
Academic and Mental Health Outcomes of Youth Placed in Out-of-Home Care: The Role of School Stability and Engagement Leonard & Gudino (2016)	420 youth in out-of-home care ages six and older, spanning from 97 different countries.	Randomized data from the National Survey of Child and Adolescent Well-Being was researched and analyzed regarding school stability, academic achievement, and mental health.	The Mini-Battery of Achievement was used to assess academic achievement, the Youth Self-Report measured emotional and behavioral problems, Kaufman Brief Intelligence Test measured verbal and non-verbal intelligence. Analyses	72% of participants had at least 2 placements in a 36-month time period, and 54% had 3 or more placements. Home instability was positively correlated to school instability. Reading and math achievement were not significantly predicted through school stability and school engagement.

			was conducted using Mplus, as well as ANOVA analyses.	
Educational Supports for Middle School Youths Involved in the Foster Care System Tyre (2012)	76 middle school youth (6 th -8 th grade) in foster care from four Seattle area middle schools	The sample population received tutoring sessions from college students during school averaging 3 sessions per week for an average of 60 minutes per session.	Curriculum based measures, grade point averages, class standing, attendance, and assessments administered by teachers and tutors were analyzed. The Woodcock Reading Mastery test was used to measure oral reading fluency, and reading comprehension was measured using standardized grade-level passages. Scores from the fall and spring were compared using paired-samples <i>t</i> tests.	At the start of the school year, 37% of students were below the 25 th percentile for their grade, at the end of the year 27% of these students improved their performance to the 25 th percentile or higher. Students had significant gains in reading fluency and comprehension. The collaboration of having a full-time teacher as well as a staff of paid tutors worked extremely well, but may not be feasible to implement in all schools due to cost.
Context Matters: Experimental evaluation of home-based tutoring for youth in foster care Zinn & Courtney (2014)	529 adolescent foster care youth ages 14-15 years old in Los Angeles California who are one to three years behind grade level in reading or math	Students were randomly assigned to the control group or to receive ESTEP tutoring. Youth were interviewed individually in person at three points in time, once at baseline and two follow-up interviews approximately 13 months apart.	Researchers used “intent to treat” analysis which yields estimates of the average impacts of offering tutoring services to eligible youth. Regression models and chi square analyses were also used.	Results showed that letter-word recognition and calculation tests declined significantly between baseline and the second follow-up, whereas comprehension tests increased significantly during this same time. Ultimately no statistically significant differences were found between tutoring and control groups.

Findings

The purpose of this systematic review was to explore the various interventions being used to increase the academic achievement of students in foster care, and the efficacy of those

interventions. While collecting literature, it became apparent that the age range outlined in the inclusion and exclusion criteria greatly limited the amount of data. Originally the inclusion criteria stated that the literature needed to study students ages 13 and younger, however there were several articles that researched older students as their participants. Therefore, this aspect of the inclusion criteria was removed when reviewing the research to allow for more expansive results.

Based on the literature gathered using the inclusion and exclusion criteria, there are several differing interventions and approaches being implemented in an attempt to increase the academic achievement of foster care students. Similarly, the efficacy of these interventions varies widely and most results were difficult to generalize. This claim is supported through themes and results in the data, which will be described in the discussion section.

Using the databases of Child Development and Adolescent Studies, ERIC, and SocIndex with Full Text and searching within the inclusion and exclusion criteria, six peer-reviewed articles met the criteria and were reviewed. Of the six articles included, five of them (83 percent) used quantitative data when researching academic achievement among foster students, and one (16 percent) used qualitative data.

Within the articles included, there were differences in the type of intervention being studied. Of the six articles gathered, two (33 percent) researched the use of a tutoring program, two (33 percent) examined the impacts of residential schooling or school stability, and two (33 percent) identified various factors that correlate to increased academic achievement in an exploratory manner. Of the articles selected for this review, four (66 percent) used participants in the United States of America, one (16 percent) was based in Wales, and one (16 percent) utilized data gathered from participants in 97 different countries. All of the articles included ($n = 6$) used

different measurement tools when analyzing the results of the study. All of the literature used as data ($n = 6$) came from peer-reviewed journals and were presented in article form.

While analyzing the literature, three themes, and one subtheme emerged in regards to interventions being used to increase academic achievement of foster care children. The themes discovered within the literature include tutoring interventions, school stability interventions, and exploratory approaches used to identify factors that aid foster student's academic achievement.

Tutoring Interventions

Two of the six identified articles (33 percent) looked at the efficacy of tutoring models being used with foster care students; one of which found the Educational Success Program (ESP) tutoring to be effective, especially in increasing reading scores (Tyre, 2012). This research study provided tutoring services to students within the classroom, as well as supplementary individual tutoring sessions during the school day. Additionally, the researchers implemented a full-time teacher whose role was to specifically assist foster students and the college aged tutors that were providing the tutoring sessions. Tyre (2012) spoke of the importance of having these supplemental educators serve as mentors to the participants, and making sure that the tutoring sessions were individualized based on what the student's needed help with. The other study found that foster care children who received Early Start to Emancipation Preparation (ESTEP) in-home tutoring services did not demonstrate statistically significant results in comparison to the control group (Zinn & Courtney, 2014). This study had tutors provide services at the student's home, and noted that a main limitation of the study was that often times the tutoring curriculum wasn't correlated to the student's school curriculum and therefore could have impacted the results.

School Stability

Two of the six identified articles (33 percent) researched the effects of school stability or residential schooling. Loring P. Jones (2012) studied the effects of residential education for foster care youth, and found that 69 percent of the students were successful, meaning that they either graduated high school, remained in school working towards graduation, reunified with their family, or were moved to a lower level of care. This study demonstrated that positive results can come from residential education, whereas Leonard and Gudino (2016) studied the effects of school stability among foster care students and found no academic benefits when increasing school placement stability. However, in the latter study the researchers examined the effects of increasing school stability has on academics, but did not implement the use of residential schooling. Therefore, while the two studies both researched school stability, the research method and tools of measurement differed vastly, which may have impacted the results.

Exploratory Approaches

Lastly, two of the articles identified took more of an exploratory approach, and sought to identify factors that aid in increasing the educational achievement of foster care students. One study that analyzed themes from the National Youth in Transition data, found that a longer time spent in foster care, receiving academic support in various forms such as special education programs, and post-secondary supports all served as positive factors for academic achievement (Hunter, Monroe & Garand, 2014). Evans, Hallett, Rees, and Roberts (2016) took a different approach, and interviewed focus groups comprised of individuals who have previously been in foster care ranging in ages from 16 to 27 years old. This study found several factors that helped increase academic achievement including having strong relationships with their caregivers, receiving support from education advocates, and group interventions. Additionally, Evans et al.,

(2016) found that the participants placed a great deal of emphasis on how academic interventions are delivered, noting that interventions that relied on additional professionals were seen as less helpful, whereas interventions that sought to strengthen the relationship between foster students and their caregivers were preferred.

Discussion

The initial premise of this research was to discover academic interventions that have demonstrated positive results when implemented with foster care youth. The actual results, however, indicate the dire need for further research and repetition of previous studies to increase the reliability and validity of interventions. The three identified themes—tutoring based interventions, school stability or residential education, and exploratory approaches all displayed mixed results, signifying the need for further research for all three types of interventions. The identified articles used in this systematic review all used different parameters, variables, and methods of measurement, and therefore the findings cannot be generalized. However, the synthesis of this research can contribute to the discussion of what is being done in education and social work practice to help support foster care students. The implications to social work practice, public policy, and continued research are discussed in the following paragraphs.

Social Work Practice

The findings in this research demonstrate that although there are various approaches being used to increase the academic achievement of foster care children, there is still work to be done in finding effective interventions to help this population of students. Children and adolescents in foster care are at high risk for negative academic outcomes such as repeating a grade level, delinquency, and academic failure (Pears et al., 2015; Trout et al., 2008). Therefore, social workers need to assist in the process of increasing the academic success for this population of students. While some tutoring interventions have shown some promise of being effective, Zinn and Courtney (2014) found that in-home ESTEP tutoring did not result in statistically significant gains when compared to the control group. In contrast, Tyre (2012) found that in-school individualized tutoring and mentoring resulted in significant academic progress for

middle-school students. When looking at the results of this research it is evident that simply providing additional academic support may not be enough to make an impact on foster student's academic outcomes; there needs to be a great deal of consideration around who the tutors are, where the tutoring is taking place, the involvement of the student's regular teachers, school staff, and care givers, and the incorporation of the student's current academic curriculum to increase the odds of success with tutoring interventions.

The research by Tyre (2012) and Mark and Zinn (2014) demonstrate the importance of relationships that tutors and other supplementary staff have with foster students and impact they can have on the efficacy of the intervention. Evans et al., (2016) results support this theory that relationships can influence the success of academic outcomes. This study emphasized the importance of the delivery agent of interventions, and prefer those that increase relationships with their primary care givers, and disliked interventions that involved additional care system professionals, considering they already are exposed to several professionals such as social workers, case managers, etc. (Evans et al., 2016). While Hunter, Monroe and Garand (2014) data didn't specify the importance of relationships, they did find that foster students who were in care for longer had better academic outcomes, which may be due to the longevity of their relationships with their caregivers or school staff. These results outline the importance of prioritizing interventions that bring foster care children and their caregivers closer together, and demonstrate that social workers should help foster care parents to be actively engaged in their student's education.

Evans et al., (2016) also found that the participants preferred group-level interventions in comparison to individual services because it allowed them to connect with other youth who had similar experiences as them, and normalized the need for support. This demonstrates the stigma

and shame that foster care students experience around receiving additional educational support. Evans et al., (2016) noted that participant felt judged by their peers when they were pulled from main stream instruction, or placed in specific foster care groups, because that marked them as being different than their peers or abnormal. Jones (2012) research on residential schooling supports the data Evans et al., (2016) found in regards to foster care students thriving more in a like-minded community. Jones (2012) found that students were provided with a community of peers with similar foster care experiences, and they could form long-term relationships with their teachers which were beneficial, and ultimately 69 percent of the students at this school had successful outcomes. This data provides insight to how foster care students feel about being singled out as different or requiring extra support simply due to being in the foster care system. Social workers should always provide services with empathy, but should pay particular attention to interventions and services that may ostracize foster care students in a shaming manner.

The findings of this study in some ways mirror the research that has been conducted previously on foster care student's academics. In terms of tutoring methods, this study found that while one tutoring intervention showed progress and academic improvements when implemented by tutors as well as a full-time teacher (Tyre, 2012), another study using tutoring found no significant results at all (Zinn & Courtney, 2014). This mirrors the research conducted by Harper and Schmidt (2016), and Flynn (2012); while Flynn (2012) found that tutoring provided by foster care givers demonstrated significant gains, Harper and Schmidt (2016) had college students provide tutoring services and found little to no positive improvements in student's academic success. When considering the varying results that tutoring interventions have yielded, it is evident that the person delivering tutoring curriculum may impact the efficacy. For instance, Flynn (2012), and Tyre (2012) found positive results from tutoring when using foster care givers,

full-time teaching staff, and college aged tutoring mentors to administer the intervention. In contrast, Zinn and Courtney (2014), and Harper and Schmidt (2016) had college students administer tutoring without involving the student's regular teachers or foster care givers, and found little to no academic gains. These results demonstrate the need for further research to fully test out the theory that results may be impacted by the individual administering the tutoring curriculum.

The results from this systematic review also supports past research on residential education. Lee and Barth (2009) found positive results when implementing residential education facilities specifically for foster care students, as did Jones (2012). While residential education is still an emerging intervention for foster care students, it is worth researching further due to the highly positive and encouraging results that both studies found. Interestingly, trying to increase school stability in other ways outside of residential education did not prove to be as effective (Leonard & Guidino, 2016), and therefore there needs to be further research on what aspects of residential education have led to increased academic outcomes, considering school stability in general is not always effective.

Public Policy

Throughout the six identified articles used in this systematic review, one consistent subtheme emerged; the percentage of African American individuals in foster care is glaring higher than those of other races. In all six studies, African American participants were the largest racial group, many times making up more than half of the participant population (Evans et al., 2016; Hunter et al., 2014; Jones, 2012; Leonard & Gudino, 2016; Tyre, 2012; and Zinn & Courtney, 2014). A policy implication to correct this skewed percentage of African Americans in foster care would be to implement additional preventative programs for potential at-risk African

American families. The AFCARS report (2015) states that in 2015, 24 percent of the children in foster care were African Americans making up nearly a quarter of all children in the foster care system. This report did state that the percentage of African American children in care has decreased between the years of 2006 and 2015, however based on continual high percentage of black children in care, there continues to be a need for policy change around this sensitive issue (AFCARS report, 2015).

Continuing Research

In order to improve the academic outcomes of foster care students, and increase our understanding of effective academic interventions, further research needs to be conducted. The results of this systematic review demonstrated that the same type of intervention can result in stark differences in terms of outcomes. While Jones (2012) found residential schooling and school stability to be highly successful, Leonard and Guidino's (2016) study found that increasing school stability did not significantly benefit academic outcomes. Similarly, Tyre (2012) found that tutoring can significantly increase reading scores and comprehension for foster youth, whereas Zinn and Courtney (2014) studied the effects of in-home tutoring and found no statistically significant gains made in academic performance. Even when using more exploratory approaches, different studies emphasized different factors that influenced the efficacy of interventions. Evans et al., (2016) found that individuals in foster care value interventions that increase their relationships with their care givers, the inclusion of games or interactive activities, and group interventions. These results are in contrast with Hunter et al., (2014) results which noted that special education services, post-secondary supports, and the longer time spent in foster care all had positive effects on educational outcomes.

These varying results demonstrate the vital need for additional research, as well as the repetition of existing interventions to decipher what factors influence the efficacy of each intervention type. Based on the findings of this research, future research should focus on the impact that relationships with care givers have on education, and if interventions that incorporate care givers have better outcomes. Studying the impact of care giver involvement has will provide additional understanding to the role that care givers should play in supporting their student's academic achievement.

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